

Phung Nguyen

Received 15 May 1978

NGUYEN BA KHOACH

A BRIEF HISTORY OF ARCHAEOLOGY IN VIETNAM

ARCHAEOLOGY is a relatively young field in Vietnam. Founded in the beginning of this century by French researchers, the field of archaeology in Vietnam can be divided into three periods: the French period, the independent period which could be divided according to regions of North and South Vietnam, and the present time.

Under the French, most of the archaeological works were initiated and directed by the École Française d'Extrême Orient. The School was established in 1898 by M. Doumer, the Governor General of Indochina at that time. The objectives of the School, as seen in the second article of its bylaws, are:

1. To work on the problems of archaeology and linguistics in the peninsula of Indochina, to promote by all means the knowledge of the area's history, monuments, and dialects.
2. To study also neighboring regions and civilizations like India, China, Malaysia. (*BEFEO* 1921:2)

At the time of its establishment in Vietnam, the field of archaeology in general was very young and its scope was rather ill-defined. To the School, archaeology, as expressed by Bezacier, "is the science of things ancient, and more precisely the knowledge of the external forms of the ancient civilizations" (Bezacier 1958:516). When applied to the Far East and particularly Vietnam, the notions of "things ancient" became very arbitrary. Bezacier

limits the archaeology of Vietnam to a period of about 20 centuries as "manifested in Dong Son Culture to the recent monument" (Bezacier 1958:517).

As far as the researchers of this period are concerned, none of them except Olov Janse was an archaeologist by training. Madeleine Colani, for example, was a botanist; Edmond Saurin was a geologist. Their lack of training in the field influenced their work. Contemporary researchers like John Matthews found that "Colani has neither defined a satisfactory typology for the collections in the Hoa Binh Province, nor has she isolated three chronological phases based on the stratification of the excavation deposits" (Matthews 1966:89). Henri Mansuy was also a prominent figure of that period. Yet in the First Congress of Prehistorians of the Far East, his excavations in the Bac Son area were questioned. The Congress stated that "the methods of excavation were not sufficiently systematic to allow any detailed conclusion being drawn on this local facies" (Matthews 1966:91).

Another characteristic of this period is the fact that there were no Vietnamese archaeologists. All archaeological research was done exclusively by foreigners.

After the French left in 1954, Vietnam was temporarily divided into two parts: North Vietnam and South Vietnam. In the South, an Institute of Archaeological and Historical Research was established around 1957. Because of lack of money and, more than that, lack of interest on the part of the authorities, there was little archaeological investigation carried on by the Institute. The few archaeological sites found in the South were discovered by Frenchmen like Edmond Saurin, who worked not for the Institute of Archaeological and Historical Research but for the Institute of Geology.

At about the same time, the Institute of History was established in North Vietnam. Within this institute there was an archaeology section; this section evolved into the Institute of Archaeology in the mid-1960s. It publishes its own bulletin, which includes articles about archaeological findings, and organizes a yearly conference for Vietnamese archaeologists to exchange ideas, which a significant number of people attend. For example, during the tenth conference, held in 1975, 88 papers were presented.

The archaeologists in the North started their first excavations in 1957 with the help of Chinese archaeologists. In the 1960s, they had the assistance of the Russian archaeologist, P. I. Boriskovski. Within two decades, they achieved a significant amount of work. They discovered the Mount Do site and reexamined the works of the French researchers in the coastal areas as well as in the mountainous areas. They revealed the Phung Nguyen Culture and excavated parts of the Co Loa Citadel. They were also able to popularize archaeology to the extent that almost everyone could help locate potential archaeological sites. The site of Phung Nguyen, for example, was located by a group of teachers and students.

Now the country has been reunited after 30 years of war and has undergone major changes. In the field of archaeology, the changes broaden the scope of archaeological activities. Almost immediately after the war there were archaeological surveys and excavations in the South. Old sites like Sa Huynh and Hang Gon were reexamined; new sites like Doc Chua were located and excavated.

In addition to the increase of activities within the country, Vietnamese archaeologists have improved their communication with Western scholars in the field. Scholars from Australia, France, Denmark, and the United States were invited to visit Vietnam. Vietnamese archaeologists were sent out in exchange programs.

Given the present trend, the field of archaeology in Vietnam will make more and faster progress in the decade to come.

INTRODUCTION

The decade of the 1960s was one of dramatic, revolutionary change in the field of archaeology in Southeast Asia. The discovery of Spirit Cave (Gorman 1969, 1970) suggested the existence of early agriculture in Southeast Asia. The excavation of Non Nok Tha in the mid 1960s (Bayard 1970) swept away the traditional belief that China-Southeast Asia relationships were only in one direction (Solheim 1967, 1971). The discovery of Ban Chiang (Chin You-Di 1975) with its painted pottery also contributed to the rethinking of these relationships. Prior to these discoveries was the unearthing of the Phung Nguyen Culture. This discovery, although relatively little known to Western scholars, is an important contribution to the understanding of Vietnamese archaeology. More than that, it also plays an important role in explaining the relationships among the peoples in Southeast Asia in early times.

To fully understand the Phung Nguyen Culture will take the work of many people. In this paper I shall limit myself to the following three objectives: to present information about the Phung Nguyen Culture, to discuss the role of the culture in the context of Vietnamese archaeology, and to find a place for the culture in the archaeology of Southeast Asia. Among the three, I feel that the first objective is the most important for now. Most of the writings about the culture are in Vietnamese, and only a few Western scholars in the field of archaeology are able to understand the language.

I have divided this paper into five parts. In the first, I describe the sites of the Phung Nguyen Culture. The second part describes and discusses the findings in these sites. The third part investigates dating. The fourth part is an attempt to reconstruct the Phung Nguyen Culture as a whole. The fifth will discuss briefly the role of the culture in Vietnamese archaeology.

SITES OF THE PHUNG NGUYEN CULTURE

In general, the sites of the Phung Nguyen Culture (Fig. 1) are found in locations normally higher by several meters than the surrounding terrain (for example, the sites of Phung Nguyen and Yen Tang), or even 10–15 m above the surrounding fields (for example, the sites of An Dao and Huong Non). Most of these sites are near rivers or streams. The site of Huong Non is near the stream Di Nau, which leads to the Red River; the site of Dau Duong is near the stream Phuong Giao, which leads to the Lo River; and the site of Phung Nguyen itself is less than 1000 m from the Red River.

A description of some of these sites gives us a general idea of the sites themselves. Phung Nguyen is located in the hamlet of Phung Nguyen, Lam Thao district, Phu Tho Province. Here there were two excavations: the first one in 1959, known as Co Nhue, and the second in 1960, known as Phung Nguyen. The Co Nhue excavation covered an area of about 150 sq m. It has four natural layers but only one cultural level. The cultural level is rather thick, varying from 21 to 121 cm, and coincides with the third natural layer (Nghia 1960:128).

The Phung Nguyen excavation covered a much larger area, about 3700 sq m. In this excavation there were also four natural layers: the humus on the top, a layer of fine white soil, a layer of fluvial soil mixed with small rocks, and a final layer of sterile soil. Again, only one cultural level was detected. This cultural level includes the second and the third natural layers (Chinh 1966:105).

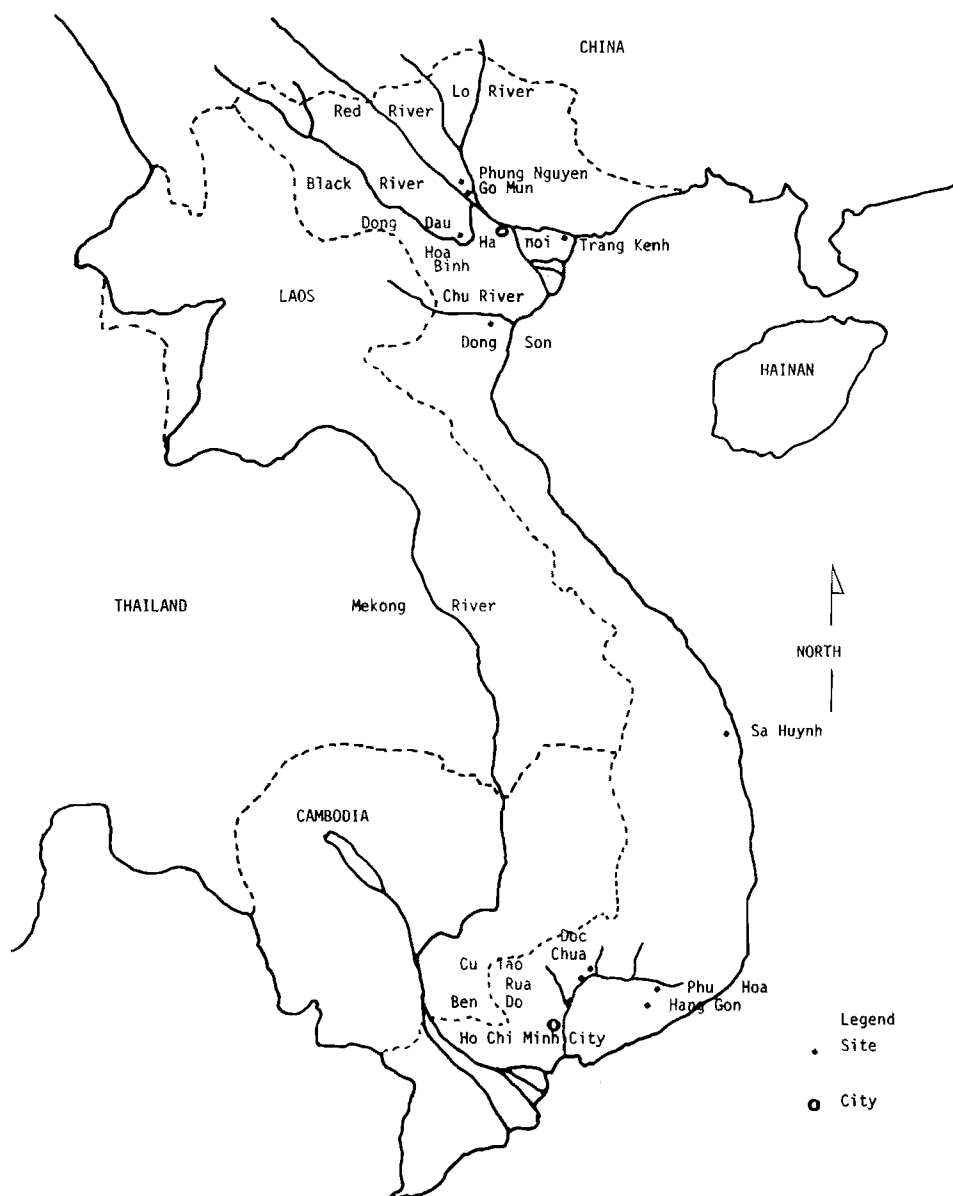


Fig. 1 Archaeological sites of Vietnam.

Another site is the site of Van Dien, about 9 km southwest of Hanoi, which was located and excavated in 1962. The excavation covered an area of about 800 sq m. In 1964, it was excavated again (Chinh and Dinh 1966:105). The site of Van Dien had five natural layers, including the sterile one. Like the other sites, there was only one cultural level, which extended from the third to the fourth natural layers (Chinh and Dinh 1966:107).

In short, the sites of the Phung Nguyen Culture usually have one cultural level. This

cultural level is usually rather thick, although in some cases it is thin. The findings in those sites are very similar to one another: stone axes, stone adzes, stone ornaments, pottery with different motifs of decoration, ceramic artifacts other than pottery, and so on.

FINDINGS FROM THE PHUNG NGUYEN CULTURE SITES

The findings can be divided into three general categories: stone implements, ceramic implements, and nonartifact findings. The stone implements in turn can be divided into two categories: tools and ornaments.

Stone tools were found in large numbers in the Phung Nguyen sites. They consist of axes, adzes, grinding stones, chisels, gouges, arrowheads, drills, and knives.

Axes and adzes are among the implements most frequently found in the sites (Fig. 2). At the site of Phung Nguyen itself, 441 axes, 328 adzes, and many fragments of implements were found (Chinh 1966:139). At Van Dien, the number of axes is smaller than that of adzes: 56 axes in contrast to 133 adzes (Chinh and Dinh 1966:113).

As far as shape is concerned, the axe/adzes are quadrangular and all are well polished.

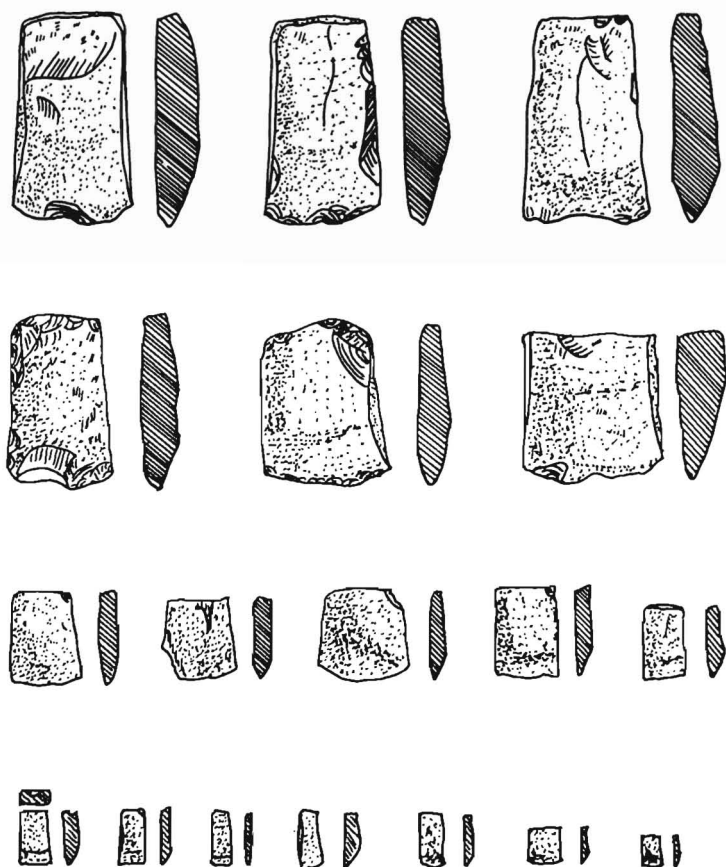


Fig. 2 Axes and adzes of the Phung Nguyen Culture (Chinh 1966:151).

Their size varies: some are as short as 1.7 cm, others are as long as 11 cm (Chinh 1966:139; Chinh and Dinh 1966:113). In his report on Phung Nguyen, Chinh arbitrarily divides the axes into three types according to their sizes: large, medium, and small. The large ones have a width of about 5 cm or more, and their length varies from 5.5 to 10 cm. The medium size has a width of about 3.5 cm and a length of 3.5 to 6.5 cm. The width of the small-sized ones varies from 1 to 2.6 cm, the length from 1.3 to 5.8 cm (Chinh 1966:139). At Phung Nguyen, the small axes are more numerous than the large ones: 210 in contrast to 136 of the medium size and 95 of the large size. The adzes of this size show similar proportions (Chinh 1966:139). In the Van Dien site, the small axes are less numerous than the large ones, whereas the small adzes are more numerous (Chinh and Dinh 1966:113).

In addition to the normal axes, a peculiar one was also found at Phung Nguyen. It is a small axe bearing a hole about 0.5 cm in diameter and 0.3 cm deep. The hole is near the butt of the axe (Chinh 1966:139).

What could be the use of these implements? They can be used for cutting trees, for hollowing tree trunks, and probably for agricultural work. Today in Vietnam people use hoes that are similar in many ways to adzes to do the digging. Probably in the time of Phung Nguyen people used some kinds of adzes in digging also.

With the large variety of sizes—some are rather small, impossible to use in agricultural work—they could also be used in carpentry.

The artifacts could have been used as ornaments. Most of the axe/adzes, especially the small ones, are made of precious stone. Some are very small. The smallest axe measures 1.3 cm long, 1 cm wide at the blade, and 0.8 cm at the butt (Chinh 1966:139). With such a size, they could be used to do refined cutting or carving. In some small axes, there is a hole near the butt of the object, which could have been worn as a pendant (Chinh 1966:113).

Besides the Phung Nguyen Culture, quadrangular axe/adzes were found in many places in Southeast Asia. They were found in the sites of the Mai Pha Culture in North Vietnam and also in the Bau Tro sites, which are concentrated in the north of central Vietnam (Davidson 1974:86). Although they were not found on the Ha Long Bay Islands, they were found on the islands of the Hong Kong area. Moving south, we also encounter that type. In the city of Song Be, in southern Vietnam, the most recent excavation yielded many artifacts, among them the quadrangular axe/adzes. These artifacts, however, are not well polished (Kinh 1977:4-25).

In the sites of Phung Nguyen, the second most numerous stone implements are grinding stones. At the site of Phung Nguyen itself, about 172 grinding stones were found (Chinh 1966:141); at Van Dien, 184 of them were unearthed (Chinh and Dinh 1966:115). In general, these are stones of different shapes: some are rectangular, some circular, and so on. They can be divided into different types by patterns of wear.

The first type are the ones that have random grooves on their surfaces. The cross section of these grooves is semicircular. They are usually made out of coarse stone. About seven were found at Van Dien (Chinh and Dinh 1966:115). They were also found at the Phung Nguyen site itself. At Van Dien there is a variation of this type characterized by narrow grooves that run on many surfaces of the stone at random. These grooves look like marks of a knife grinding on the surfaces. Sixty-five of this type were found at Van Dien (Chinh and Dinh 1966:115).

The second type of grinding stone is characterized by parallel grooves on the rectangu-

lar stones. These grooves usually number six or seven only, and the stone used is usually of fine texture (Chinh 1966:142). The third type is characterized by a large flat grinding surface. In some places, like Van Dien, this type is numerous, up to 112 of them (Chinh and Dinh 1966:115).

Apparently the people at that time used grinding stones intensively. This is apparent because many grinding stones of different types were found. More interesting than this, however, is the proportion of stone implements to grinding stones. The last point will be clearer if we look at the specific use of each type of grinding stones.

According to the wear patterns of the third type of stones, they must have been used to grind large implements, presumably axes and adzes. In the Van Dien site, for example, there are only 228 axe/adzes; against that number there are 112 grinding stones. Thus for approximately two axe/adzes, there is one grinding stone. As for the use of the first two types of grinding stones, they were probably used to grind something small like bracelets, beads, or the like.

Chisels were among the artifacts found at the Phung Nguyen sites. They are of two types: the flat blade, or common, chisels, and the gouge. Common chisels are more frequent than gouges. In terms of shape, the common chisels are rectangular with a beveled blade; they are trapezoidal or rectangular in cross section. The gouge is similar in shape except that its blade is curved at the end. At Van Dien, 22 of the first type and 2 of the second type were found (Chinh and Dinh 1966:114). At Phung Nguyen itself, only 4 of the first type and 1 of the second type were found (Chinh 1966:140). They were also unearthed at Doi Giam (Tan 1976:62).

Chisels and gouges were also found in other places. In her discussion of the prehistory of Indochina, Madeleine Colani mentions finding some gouges in the area of Yen Lac (Colani 1931:333), the area of Kim Bang (Colani 1931:340), and also that of Lang Bon (Colani 1931:373). These gouges or chisels were made of bone. In a brief report about the archaeology of the northwest of Vietnam, Chu Van Tan also mentions finding a chisel made out of a monkey bone in the area of Tham Khuong, Dien Bien (Tan 1976:47).

Chisels and gouges, as their names suggest, are used in carpentry. Vo Quy suggests that the chisels were used to make stone bracelets. He shows a picture of a bracelet which he thinks was made by using a chisel (Quy 1976:72).

Drills are among the implements found in these sites. At Van Dien, for example, one drill was found. Rectangular in shape and square in cross section, it is made of quartzite and is completely polished (Chinh and Dinh 1966:115). In other places, like the site of Phung Nguyen itself, the drills have different shapes and are made of different materials. Some are triangular in contour and rectangular in cross section; some are solid with poly-angular cross sections. Whatever shape they have, they are well polished (Chinh 1966:141). At Trang Kenh, hundreds of drills were found (Quy 1976:71). Tan also mentions finding them at Doi Giam (Tan 1976:62).

Another type of artifact is stone knives. Stone knives were found in the sites of Phung Nguyen, but they are rather rare. For example, only one was found at Van Dien (Chinh and Dinh 1966:115). The whole ones have the shape of an ellipse with a diamond-shaped cross section.

Among the most significant remains unearthed at the Phung Nguyen sites are stone arrowheads (Fig. 3). Although they are small in number, they have a relatively large variety. In the site of Van Dien, hundreds of stone axe/adzes were found, yet only three stone arrowheads were found (Chinh and Dinh 1966:114), and at Phung Nguyen, stone axes,

stone adzes, and even grinding stones were found in the hundreds while only seven stone arrowheads were found (Chinh 1966:140).

Arrowheads are classified into different types and subtypes, according to their forms. The first type shares the following common characteristic: their cross section is triangular. The second type is characterized by its lenticular cross section, which varies in thickness; sometimes the cross section looks almost circular. The second type is divided into different subtypes, depending on the contour: the triangular contour, the leaf-shaped contour, and the triangular blade with rectangular handle.

Stone arrowheads and points are rare in the stone age of Vietnam. It is possible that the people of ancient times used bamboo to make points and arrowheads instead of using stone. Points and arrowheads became popular during the bronze age (Fig. 4). Janse noted in his report on Dong Son that "among the most common findings are the spear heads and arrowheads" (Janse 1958:47).

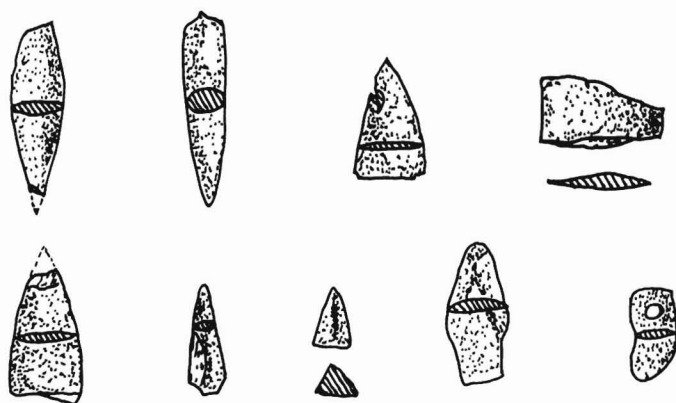


Fig. 3 Stone arrowheads of the Phung Nguyen Culture (Chinh 1966:152).

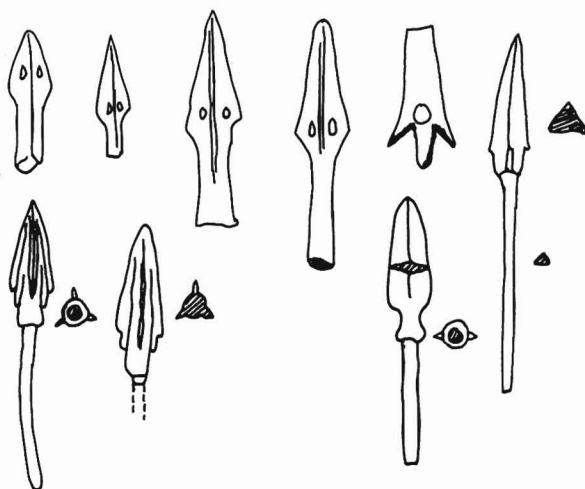


Fig. 4 Bronze arrowheads of the Dongson Culture (Janse 1958:127).

Judging from their shapes, the arrowheads of the bronze period seem to be related to those of the Phung Nguyen time. The differences between the stone arrowheads and the bronze ones are that the bronze ones always have either two or three wings and that most of the bronze ones are socketed. The similarity between the two types is significant, however. Like the stone arrowheads, the bronze ones have two main types of cross sections: circular and triangular. It seems to me that the bronze arrowheads have the basic forms of the stone ones and then add some new modification that cannot be done in stone. The stone arrowheads could be the prototype of the bronze arrowheads.

Concerning the stone ornaments, at the sites of the Phung Nguyen Culture there are two kinds: bracelets and beads. The bracelets are abundant (Fig. 5): 390 fragments were

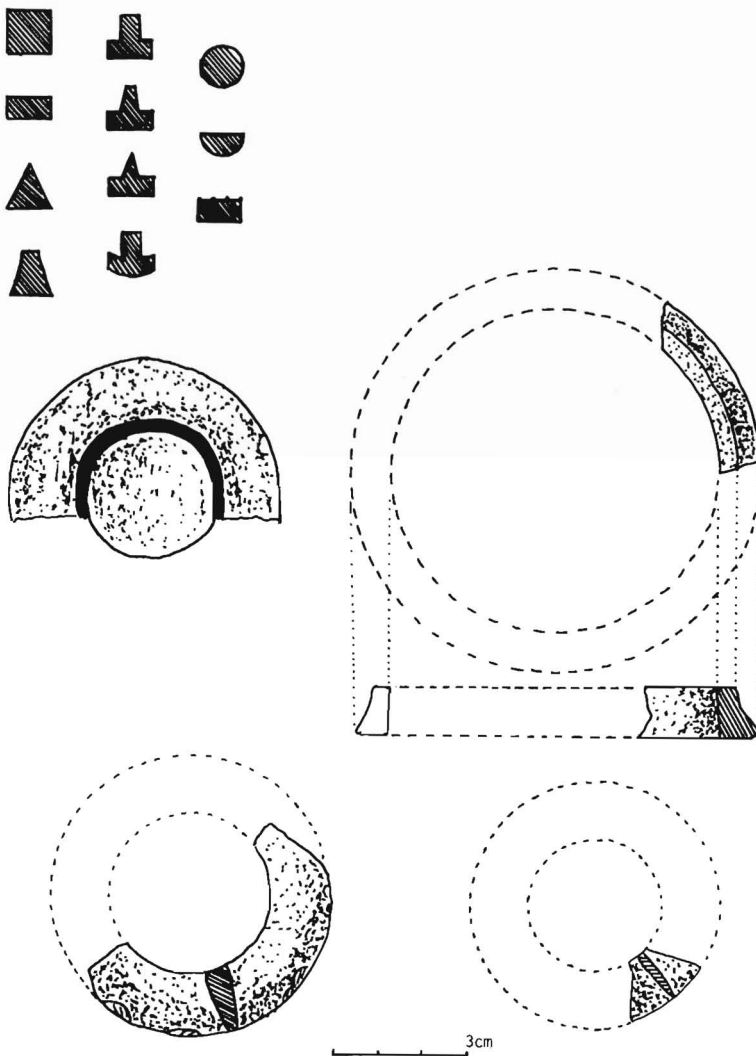


Fig. 5 *Top*, cross sections of Phung Nguyen bracelets (drawn from Quy 1976:70); *middle*, stone bracelet and core of the Phung Nguyen Culture (drawn from Quy 1976:71); *bottom*, bracelets of the Phung Nguyen Culture (Chinh 1966:53).

found at the site of Phung Nguyen itself. Each fragment is about two-thirds or one-half of a whole one (Chinh 1966:142). At Van Dien, 592 fragments were found together with two whole bracelets (Chinh and Dinh 1966:116). Fragments of stone bracelets were also found at Tu Son (Boriskovski 1969-1970:235), at Lung Hoa (Boriskovski 1969-1970:236), at Trang Kenh, and at Go Bong (Quy 1976:69). Most of the bracelets were made out of rock such as quartzite, amphibolite, nephrite, and even jasper. Their shape varies in terms of cross section. The cross section varies from rectangular to triangular, from semicircular to circular, from a straight T shape to a skewed one. One special type of bracelet is also found that looks like a short cylinder, with a relief decoration running outside. All of the bracelets are well polished. Their sizes vary greatly; the smallest bracelet has an inside diameter of only 2.1 cm, and the largest one has an inside diameter of about 8.1 cm (Chinh 1966:142).

By the large number, we can see that bracelets were widely used during that time. Because there are bracelets of very small size, however, some people wonder if they were worn like normal bracelets. Boriskovski notes the idea of a Vietnamese archaeologist that they might have been used as a form of money (Boriskovski 1969-1970:235). Others suggest that they might be worn by children. They could also be earrings.

As for the manufacture of such bracelets, Chinh reports that he found some of the cores of the bracelets. He suggests that people drilled a selected piece of stone to make the rough shape of the bracelet and then polished it (Chinh 1966:142). According to Quy, the making of bracelets went through several stages. First of all, people used the technique of sawing and chipping to manufacture the rough discs of stone *en masse*. Then they worked the core of the pieces of prepared stone by using the drill and the chisel.

As far as relationships with other cultures are concerned, the bracelets of the Phung Nguyen Culture are very similar to those of the Dongson Culture. Boriskovski observes that "the bracelets found at the site of Tu Son [a Phung Nguyen site] closely resemble the bronze bracelets from the Dong Son burial ground of Thieu Duong" (Boriskovski 1969-1970:235). Bronze bracelets with semicircular cross sections were found in many places like Dinh Chang (Ha Noi), Go Chien Vay (Ha Tay), Hoang Ly, and Thieu Dong (Thanh Hoa). They might be the descendants of, or at least related to, the semicircular cross-section bracelets of the Phung Nguyen Culture (Sinh 1976:53).

Another similarity can be seen in the short cylindrical stone bracelets of the Phung Nguyen time and the bronze cylinders of the Dong Son time. On the outside of such stone implements are lines in relief running around the implement (Fig. 6). The bronze counterpart almost always has decoration on the outside. Sometimes the relief lines outside a bronze cylindrical bracelet pile on top of each other; this gives the impression that the bronze bracelet was made of individual rings. In the southern part of present-day Vietnam the stone rings were also found at Phuoc Tan and Ben Do (Manh 1977:27).

Another kind of ornament is stone beads (Fig. 6). The stone beads are less numerous than the stone bracelets and are of a different shape and different size. Some look like a small cylinder with a hole drilled along the axis; the two ends are either flat or beveled. Others look like an ellipse with a hole drilled along the large axis. The smallest measures 0.6 cm in diameter and is about 0.4 cm long; the biggest measures 0.8 and 2 cm, respectively (Chinh and Dinh 1966:117; Chinh 1966:143).

Stone beads of these types were also found in the Dongson Culture sites. In Thieu Duong, for example, among other artifacts is a bead about 4.5 cm long and 1 cm in diameter (Duy 1966:215). In the tombs of the Dongson Culture there are also beads which were

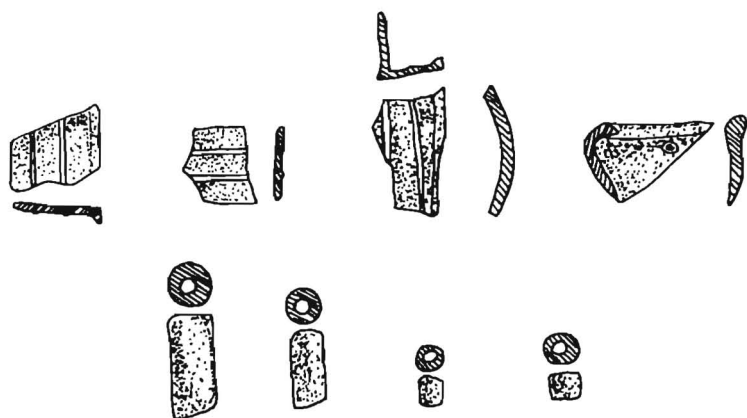


Fig. 6 Bracelets and beads of the Phung Nguyen Culture (Chinh 1966:153).

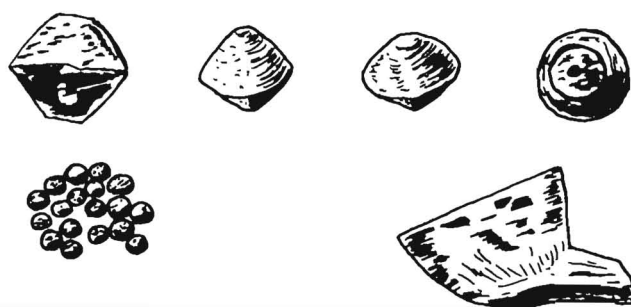


Fig. 7 Top, spindle whorls of the Dongson Culture (drawn from Janse 1958:pls. 12, 17); bottom left, clay balls at the site in Song Be city, northwest of Saigon (drawn from Kinh 1977:21); bottom right, *moi*, a unique pot found at Phung Nguyen (drawn from Chinh 1966:151).

made of different kinds of materials (Janse 1958:pl. 50). At Hang Gon, Saurin notes the discovery of a bead made of carnelian (Saurin 1973:346). Beads of the Hang Gon type were also found at Sa Huynh. Until the 1960s, people thought that these beads came from India with Indian merchants at the beginning of the era. According to D. G. E. Hall, Funan, among the first Indianized states in Southeast Asia, dates from around the first century A.D. (Hall 1955:23).

In addition to stone artifacts, ceramics were also frequently found in the sites of the Phung Nguyen Culture. The pottery here was usually made with clay and a fine grain sand temper. They were fired at rather high temperatures, around 600° to 700°C (Khau 1976:8). In some sites, however, the temperatures were a little lower, around 500° to 600°C (Davidson 1975:88). Because the temperatures were not very well controlled, the ceramics have different colors, ranging from yellow to red to grayish black.

The ceramics of the Phung Nguyen Culture can be divided into different types according to their general function. They consist of spindle whorls, clay balls (Fig. 7), and, most important, pottery vessels with a large range of decorations as well as of shapes.

The spindle whorls found at the sites of the Phung Nguyen Culture are small in num-

ber. At Van Dien, for example, only four were found; at Phung Nguyen, a bigger site, only eight. Although relatively few spindle whorls were found, they belong to at least two different types. The first one has a trunconical shape. The second type has a disc shape with two slightly concave surfaces; at the center is a perforation.

Clay balls were more frequently found in the Phung Nguyen sites than were spindle whorls. They are made of clay in the form of small balls whose diameter varies from 1.5 to 2 cm (Chinh 1966:135). Forty-five clay balls were reported to be found at Phung Nguyen (Chinh 1966:136) and 92 were reported at Van Dien (Chinh and Dinh 1966:111). The distribution of the clay balls within the site of Phung Nguyen is interesting. Among 45 balls found in this site, 36 were found in the same place, in a hole of black ash (Chinh 1966:136).

Clay balls were also found in places other than the sites of the Phung Nguyen Culture. In the site of Ben Do, near Saigon, hundreds of clay balls were found (Kinh 1977:21). That site is tentatively dated by a Vietnamese archaeologist around the end of the second and the beginning of the first millennium B.C. The balls were also found in Hang Gon, Samron Sen, Mlu Prei, Bine Hoa, and Oc Eo (cited in Saurin 1973:341). As for the use of these balls, some people think they were used in blowpipes (Chinh 1966:111); others believe that they were used in slingshots (Davidson 1974).

The most important ceramic findings in the sites of Phung Nguyen are pottery. A great number of potsherds and several hundred whole or reconstructible pots were found in the sites of the Phung Nguyen Culture. Using the function of the pots as one main criterion, Trinh Sinh and his colleague Nguyen Diem divided the pottery of the Phung Nguyen Culture into different types: pots, bowls, vessels, jars, and bottles.¹ For our purpose here, I think it would be more convenient to classify the pottery merely on the basis of form. Therefore we have three basic forms of pottery: round-bottomed, flat-bottomed, and ring-footed.

The round-bottomed pots in the Phung Nguyen sites have different body and rim forms (Fig. 8a, 8b). The body can be globular, ovoidal, semispherical, or slightly angular. Sometimes an everted rim is attached to the body. The rim can be very short, making it look like a relief design mounted on the edge of the pot. Sometimes the rim disappears completely. For the pot with an angular body, there is a rather clear distinction between the upper part and the lower part; together, they form an acute angle. Its rim is rather large and flaring. The size of these pots varies: the smallest has a mouth diameter of around 10 to 12 cm and a height of about 7 to 10 cm. The largest has a mouth diameter of about 35 to 40 cm and a height of 30 to 35 cm (Sinh and Diem 1977:51). As Sinh and his colleague point out, these pots, or their counterparts, were also found in the Dongson period.

The flat-bottomed pots appear to have less variation (Fig. 9). Their bodies have two main shapes, the regular cylindrical body with slightly everted rim, and the square mouth. The cylindrical pots are usually low, with the diameter about two or three times bigger than the height. The smallest of this type has a mouth diameter of about 18 to 20 cm and a height of about 4 to 6 cm. The biggest has a mouth diameter of 50 to 52 cm and a height of 14 to 16 cm. For the second type, the mouth measures about 22 to 24 cm, the bottom diameter about 12 to 14 cm, and the height about 20 to 22 cm (Sinh and Diem 1977:56).

These types of pots were not found in the Dongson period; however, they were found at Thieu Duong, a bronze age site.

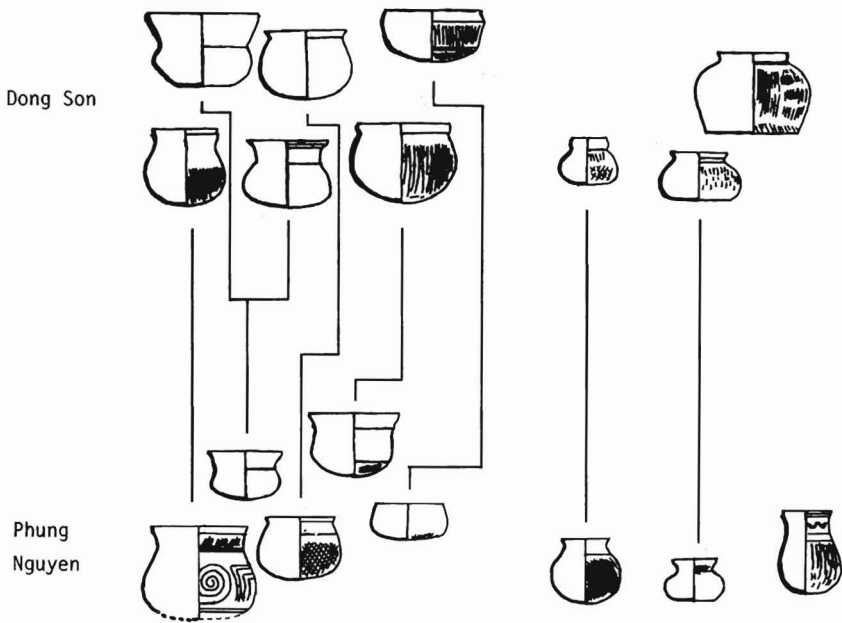


Fig. 8a The round-bottomed pots of the Phung Nguyen Culture and the Dongson Culture (rearranged from Sinh and Diem 1977:53).

The third type of pottery is the ring-footed vessel (Fig. 10). Again this type has different body shapes, with different rim shapes. The common body is spherical with variations: some look more spherical than others, some look globular with relief lines on the outside, and some are inverted truncate. Others have a cylindrical shape. The rim that fits with these bodies is a slightly everted rim, and their ring foot is a short truncate. For the spherical pottery, the rim diameter is about 20 to 22 cm, the belly diameter about 22 to 24 cm, and the height 16 to 18 cm. For the trunconical pottery, the rim diameter is about 26 to 28 cm, the ring foot about 16 to 18 cm, and the height about 20 to 22 cm; for the cylindrical pottery, the mouth is about 16 to 18 cm in diameter, the ring foot about 10 to 12 cm in diameter, and the height varies from 14 to 16 cm.

All of these types were found in the Dongson period. In the Dongson period, the ring became higher and the ring diameter became smaller. The spherical pots in the Dongson period became more angular and their belly more protruding (Sinh and Diem 1977:58); they seem to match with some of the Sa-huynh pottery.

Bowls were also found (Fig. 11). These have different shapes. The two main ones are cylindrical and semispherical. Some of them have a ring foot, some do not. The smallest has a mouth diameter of about 2 to 3 cm and a height of 2 to 3 cm. The biggest one has a mouth diameter of around 6 to 7 cm and a height of around 5 to 6 cm (Sinh and Diem 1977:56).

One unique pot found at the Phung Nguyen site itself is called *moi* in Vietnamese (Fig. 7). It consists of two parts: a container and a handle. The container looks like a bowl with the bottom attached to the handle. The rim diameter is about 15.5 cm, the depth is 9 cm, and the thickness of the wall is about 8.8 cm. The handle is rectangular in shape, curved

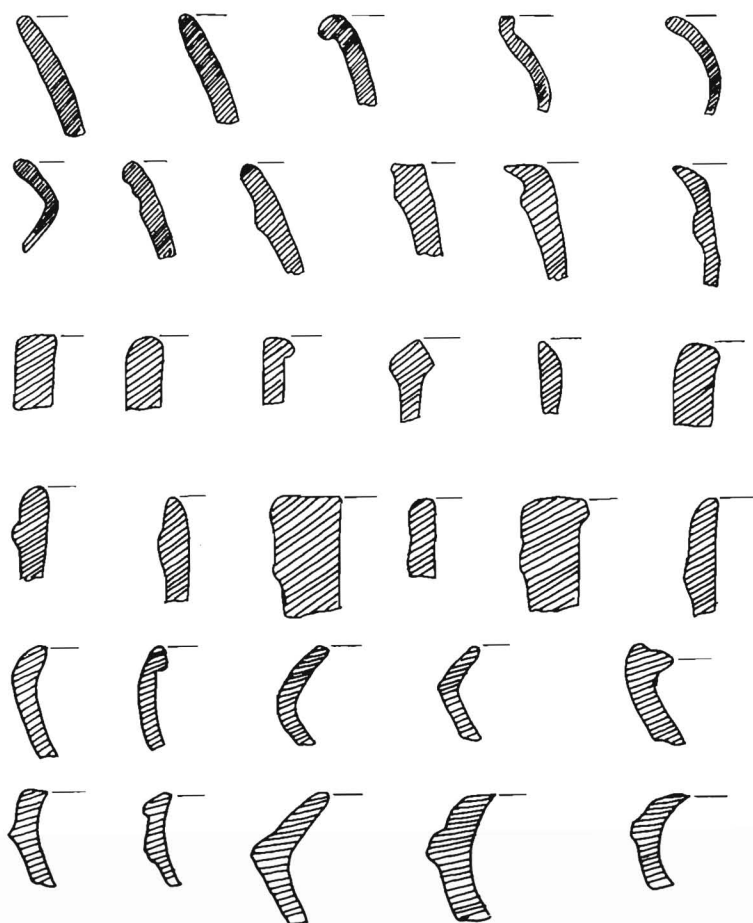


Fig. 8b Rim shapes of the Phung Nguyen Culture (Khau 1976:10).

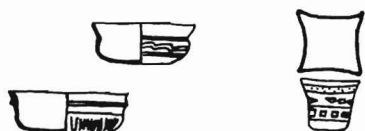


Fig. 9 Flat-bottomed pots of the Phung Nguyen Culture (Sinh and Diem 1977:56).

slightly downward at the end. It measures 15 cm including the body, 9 cm long and 2 cm thick (Chinh 1966:134). No one has any idea of the use of this object.

In the sites of Phung Nguyen there is another special type of pottery, called *chac* in Vietnamese. Generally the *chac* consists of two parts: a hollow conical body and two feet, a small foot branching off from the big one (Fig. 12a). Obviously they cannot stand stably by themselves, unless they stand with the foot up (Fig. 12b, c).

The *chac* was first found by Janse in his excavation at Dong Son at Thanh Hoa (Fig.

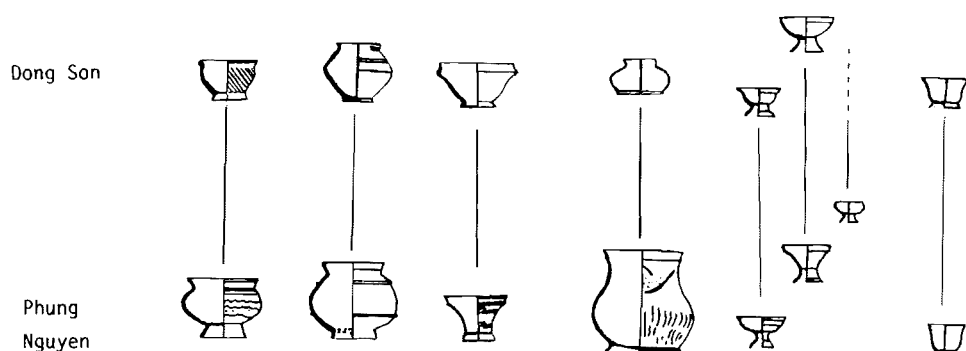


Fig. 10 Ring-footed pots of the Phung Nguyen Culture and the Dongson Culture (rearranged from Sinh and Diem 1977:58).

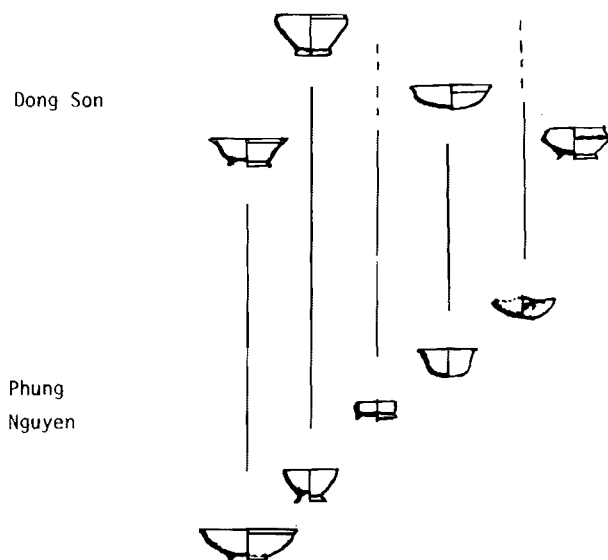


Fig. 11 The bowls of the Phung Nguyen Culture and the Dongson Culture (rearranged from Sinh and Diem 1977:53).

12d). He said he found a “great many fragments of these objects, but unfortunately only a few are complete” (Janse 1958:80). The excavation of the Phung Nguyen sites also yielded a great number of fragments of these objects; few of them are complete. The site of Phung Nguyen yielded 35 relatively whole *chac*; among them only two are actually whole (Chinh 1966:135). At Van Dien, only 6 fragments were found (Chinh and Dinh 1966:111). They were also found at Lung Hoa (Vinh Phu), Go Bong, Nghia Lap, Dong Vang (Ha Noi), Bai Cu and Dong Ngam (Thanh Hoa), at Sa Huynh, Dau Day, and Oc Eo (Phung 1977:41; Hoa 1977:70).

Although the function of the objects is not known to us, they, along with other remains, give some indications of the relationship of the Phung Nguyen Culture to cultures of later

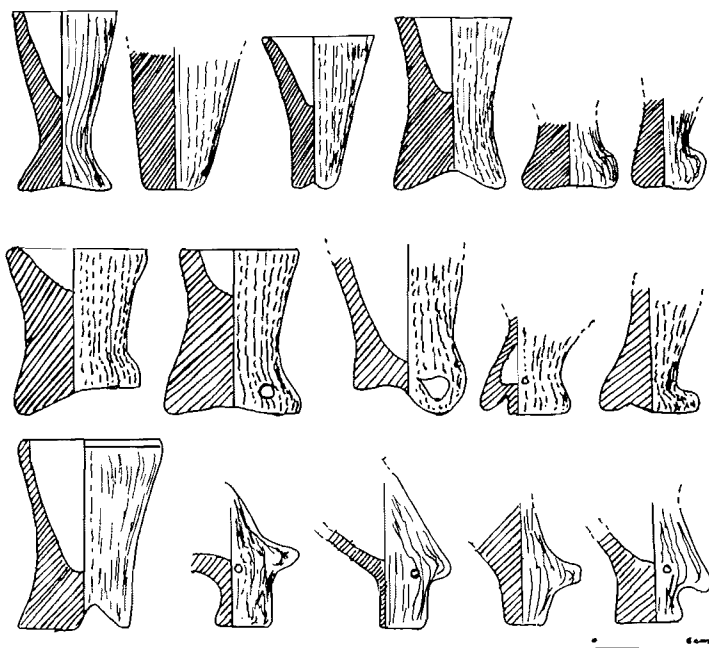


Fig. 12a *Chac* of the Phung Nguyen Culture (Hoa 1977:70).

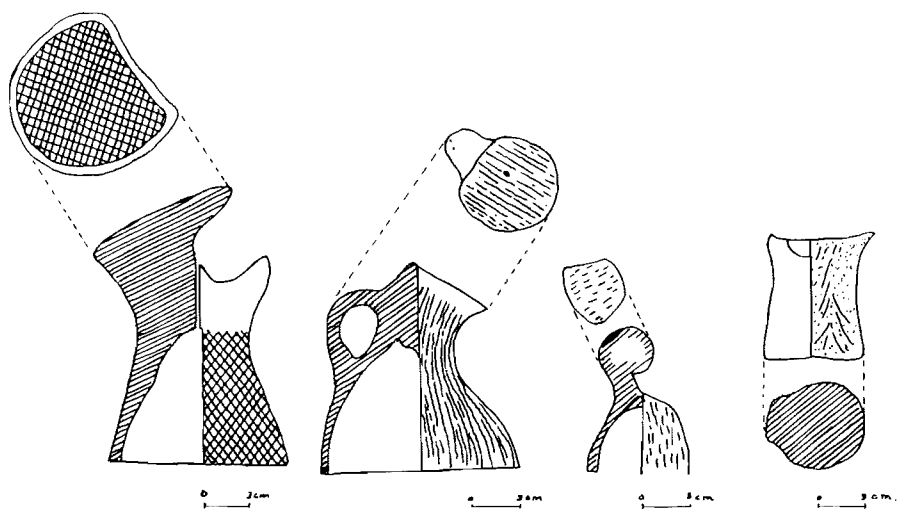


Fig. 12b *Chac* of the Phung Nguyen period (Phung 1977:41).

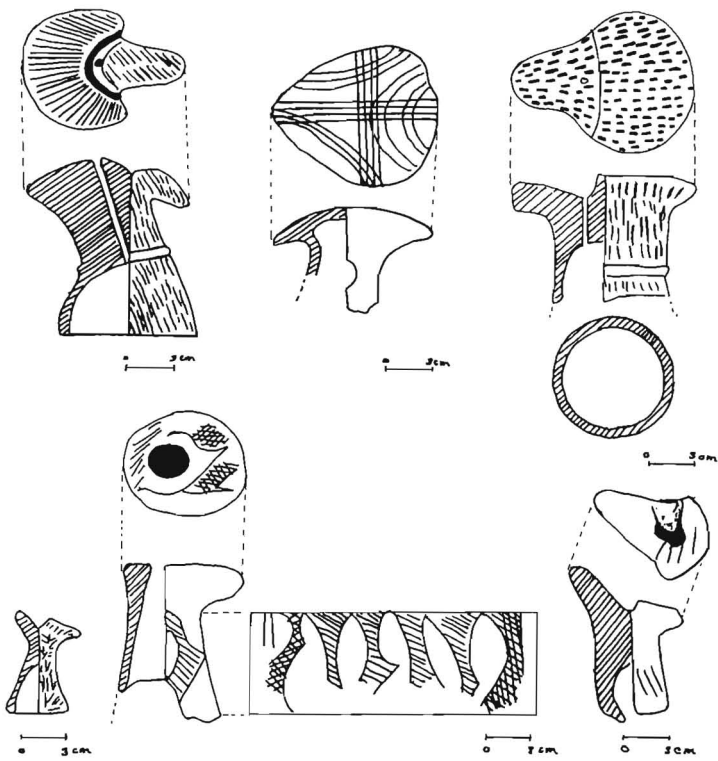


Fig. 12c *Chac* of the Phung Nguyen period (Phung 1977:43).

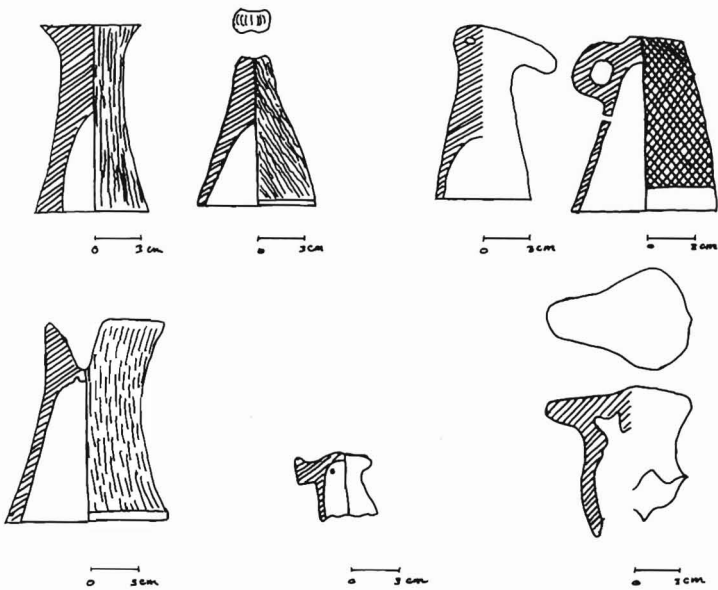


Fig. 12d *Chac* of the Dongson period (Phung 1977:48).

periods. In the Phung Nguyen period there are more forms than in the following periods. However, the basic forms remain the same. Some people think that the *chac* is a bronze age invention (Hoa 1977:70). We disagree with that idea, but we cannot deny a sense of continuity between the Phung Nguyen Culture and those that follow.

The decoration of the pottery of Phung Nguyen is an important subject in itself. In this paper I will not cover all of the problems related to the pottery decoration of the Phung Nguyen Culture. What I will try to do is to give a brief description of the techniques and motifs of decoration and to point out some similarities in the decorative motifs between Phung Nguyen and other cultures, especially Dongson.

The most common methods of decorating pottery in the Phung Nguyen Culture are combing, impressing, cord marking, and appliqué. Comb marks are usually simple in terms of motifs; they are often found in the bottom area of the pots. Incisions are the most complicated in terms of decorative motifs. Unlike comb marks, incisions are usually found in the upper part of the body of the pots and also on the rim of some pots. Impressed decorations are found from the neck to near the bottom. Appliqué is usually on the neck.

The basic decorative motifs of the culture are curvilinear scrolls, their variations, and the triangular shapes which fill in the blank space of the decorated zone, the filling of the triangles having variation as well. In addition, there are also small circles, dots, and short vertical or diagonal lines which serve the purpose of filling. The scrolls can be arranged in different ways: they can be vertical, horizontal, or even oblique toward the left or right of the object. In addition, there are leaf-shaped motifs, spirals, and wavy lines (Fig. 13a).

On the basis of decorative motifs, some people try to divide the culture into different periods. To Han van Khau, the culture can be divided into three periods, each with its own characteristics: the Go Bong period (Fig. 13b), the Phung Nguyen period, and the Lung Hoa period (Fig. 13c). In the Go Bong period, the decorations were done mostly by incising. Inside, the motifs are filled with fine cord marks; the outside is usually polished (probably in order to erase the cord-marked background). The people who did the incising were rather free in drawing what they wanted. In other words, the motifs were not "standardized" yet; this seemed to be the period of experimentation. Another type of decoration found in this period is the filling of incised motifs with punctations. These were not done individually. The third characteristic of this period is the fact that there tend to be more filling elements than in the other periods.

Moving to the Phung Nguyen period, the incised decoration is on a cord-marked background, the punctations are impressed by sets, and polishing outside the motifs no longer occurs. The punctations of this period were done individually; that is the reason why they are evenly distributed inside a decoration, especially at its corner. Another characteristic of the Phung Nguyen period is the "standardization" of the motifs. In this period, however, there seem to be more motifs of decoration than in the previous one. The "standardization" here is measured by the fact that the motifs of different places show a great deal of similarity.

In the Lung Hoa period, the motifs of decoration are much simpler. They consist mainly of wavy lines, parallel lines that form scrolls, triangles, and single-lined spirals. In this period, the cord marks become cruder, but a new zone of decoration—inside the mouth—was also developed.

The decorative motifs of this culture were also found in the sites of other cultures as well. In the Dongson era, most decorations appeared in the bronze artifacts rather than on pottery as in the Phung Nguyen time.

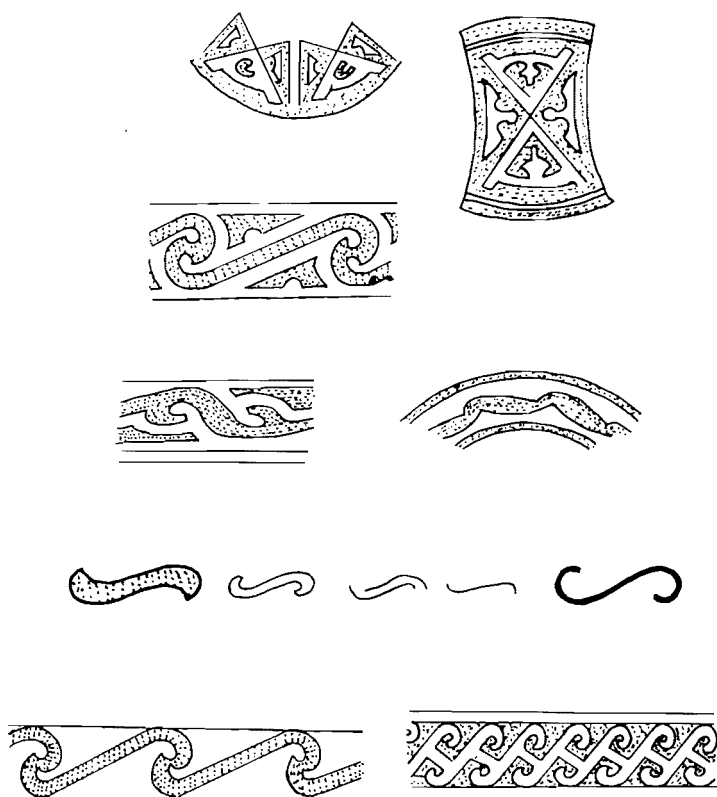


Fig. 13a Decorative motifs of the Phung Nguyen period, Phung Nguyen Culture (Khou 1976:18).

To facilitate the comparison, we can divide the decorative motifs of the Phung Nguyen Culture and those of Dongson into smaller elements, with elements understood to be the smallest parts which constitute a design motif. In that way we can tentatively say that the motifs of the Phung Nguyen Culture are based on 13 elements, as shown in Figure 14. The motifs of Dongson times are based on 7 elements (Fig. 15a, b). (The number of elements might increase if more original material could be used. My attempt to analyze the motifs into elements is based on illustrations in publications.) The comparison shows a consistent change from Phung Nguyen to Dongson: the tendency to become more geometrical in the later period. A closer look at the elements will demonstrate this.

The half spiral is an element that constitutes different kinds of scrolls found frequently in decorations of both Phung Nguyen and Dongson. In the Dongson era, this element has another variation that was not found in the Phung Nguyen time: that is, a rectangular shape (Fig. 15a, no. 6b). Similarly, the spirals found in the Phung Nguyen are usually curvilinear, whereas in the Dongson there was a rectangular spiral in addition to the curvilinear one.

Another element that is not very important in the Phung Nguyen period yet plays a significant role in Dongson times is vertical lines. In the Phung Nguyen Culture they were used, but not very often. But in the Dongson, thanks to their geometric characteristics, they were used frequently. More than forming the bands, they seem to replace the triangles, which in turn constitute the star at the center of the bronze drum tympanum.

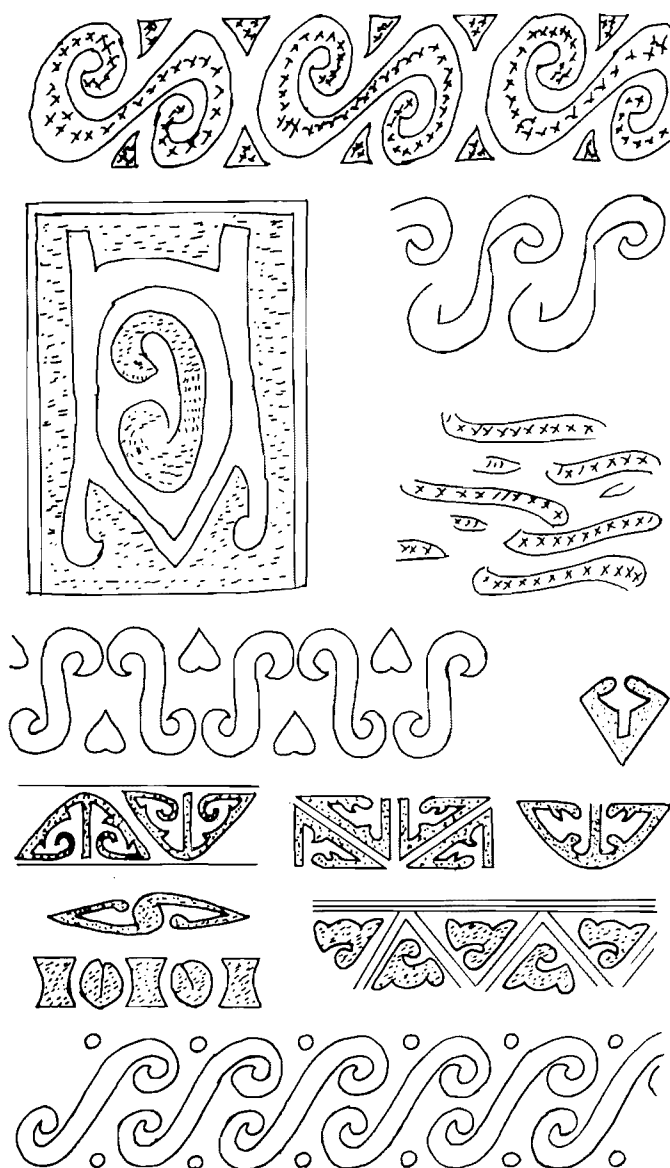


Fig. 13b Decorative motifs of the Go Bong period, Phung Nguyen Culture (Khou 1976:16).

In the Dongson, there were some elements that did not exist in the Phung Nguyen. These usually are geometric shapes like concentric circles and squares, and zoomorphic and anthropomorphic designs (Fig. 15c). Other than in Dongson, the decorative motifs of the Phung Nguyen Culture were also found in the Sa-huynh-Kalanay tradition. This was found in a large area of Southeast Asia, from the islands of Masbate (Philippines), Celebes, and Sumatra (possibly) to Sa Huynh, Malaya, Sarawak, and western Thailand (Solheim 1964:376). The designs of this tradition also consist of such motifs as “horizon-

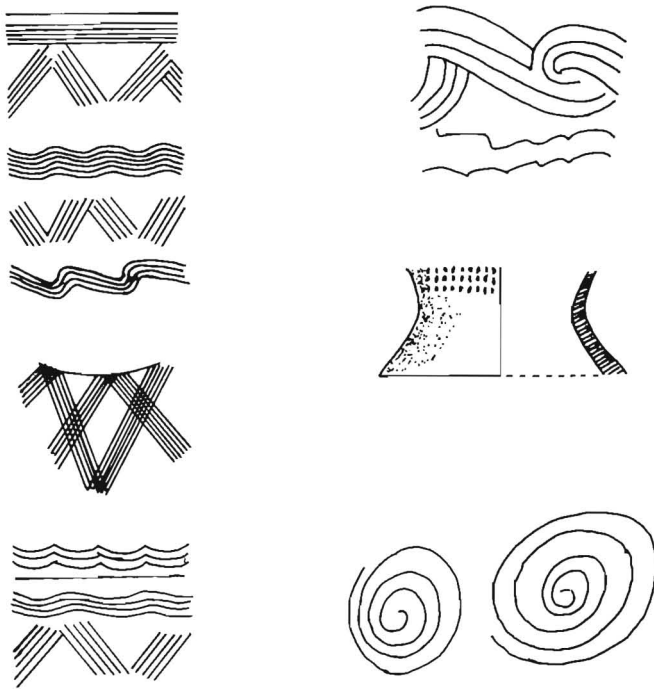


Fig. 13c Decorative motifs of the Lung Hoa period, Phung Nguyen Culture (Khou 1976:19).



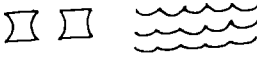


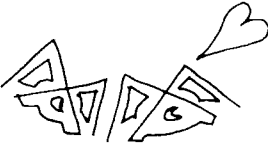


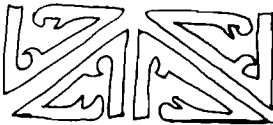
tal bands and include vertical or diagonal rectangular elements, curvilinear scrolls and meanders, zigzags, triangles and chevrons" (Solheim 1964:376).

The nonartifact findings, postholes, were also found at Phung Nguyen. The site mentioned is an area of about 3700 sq m. Within this area, 4736 postholes were found. They did not distribute evenly in the site; in one square (the site was laid out into squares 10×10 m) there were 356 holes. They are of different shapes and sizes. Their size varies from 20 to 30 cm wide, and 10 to 15 cm deep. Only one exception, a 1 m deep hole, was found. In these holes there are ashes and sometimes artifacts.

According to Chinh, the excavator of the site, the postholes are evidence of ancient houses (Chinh 1966:129). However, it is hard to explain the large number of postholes. It is possible that a long house was constructed on rather small piles, so many stilts were needed to support the house firmly. Dournes (1971: 309) shows some photographs of long houses in the mountainous area in Vietnam today. Other nonartifact findings in the sites of Phung Nguyen are animal bones and some botanical remains. Some of the animal bone remains belong to domesticated animals. At Trang Kenh, a site in the area of Hai Phong, fish bones were found (Tan 1976:91). At Trang Kenh, remains of rice were also found (Su 1976:67); at the site of Dong Dau, traces of rice were found (Su 1976:67).

DATES OF THE PHUNG NGUYEN CULTURE

Concerning the dates of the Phung Nguyen Culture, there is still controversy among scholars. Davidson suggests that the culture started sometime around 3000 B.C. and ended

Elements	Designs related to the element(s)	
1 . :	a dot	
2 ⋮ :	a set of dots.	
3 — :	a short line	
4 / \ :	vertical lines with diagonal variations	
5) :	curvy lines , varying in positions	
6 ∩ :	a half of a leaf shape	
7 ○ :	a small circle, common on border lines.	
8 ▲ :	a small triangle.	
9 ∩ :	a half of a heart shape.	
10 △ :	an open triangle.	
		
		

These are combined of 9th and 10th elements.

Fig. 14a Design elements of the Phung Nguyen Culture.


around 1500 B.C. (Davidson 1975:97). This date does not agree with the ^{14}C date of the sites of Trang Kenh and Phung Nguyen, 1455 B.C. Among the late sites of the Phung Nguyen Culture is the site of Doi Giam. This dates around 950 B.C. (uncorrected). From these dates, I tend to agree with the suggestion of Vietnamese archaeologists that the culture of Phung Nguyen started sometime around 2000 B.C. and lasted about 1000 years. At the end of its time, it must have overlapped with the cultures of the later period.

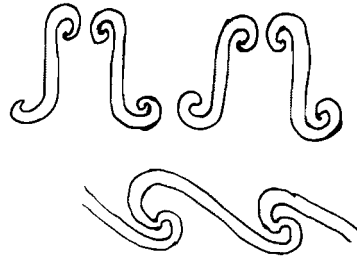
RECONSTRUCTION OF THE PHUNG NGUYEN PEOPLE AND CULTURE

The question about ancient people in Southeast Asia in general, and in Vietnam in particular, is still controversial. French scholars used to describe the remains of human skulls

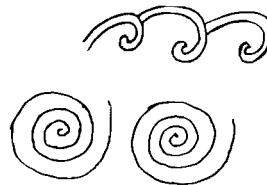
Elements


Designs related to the element(s)

11.  half a spiral



12.  a spiral



13.  parallel wavy lines

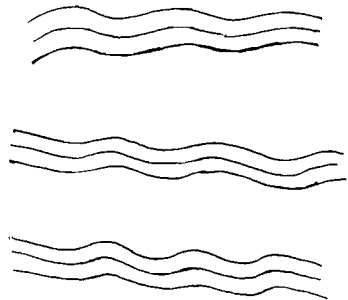


Fig. 14b Design elements of the Phung Nguyen Culture (cont.).

in Vietnam as belonging to Indonesian, Melanesian, and to Australoid, Mongoloid (Khoa 1976:134). Recently Solheim raised the question about the identity of these people, pointing out the separation between a language and the speaker of the language. He uses the term *Nusantao* to indicate the Austronesian-speaking people as an effort to clarify the existing confusion (Solheim 1975:109). However, to clarify the whole problem will be the work of many people for a long time (Solheim, personal communication). Vietnamese anthropologists are very interested in the problems of ancient men, yet they have not brought up the question of a better definition of the sub-races.

Up to now, 52 human skulls have been found in Vietnam, and these are skulls of the Mongoloid and Indonesian peoples. According to Nguyen Dinh Khoa, during the Neolithic the Australoid and the Indonesian were the two main races in Vietnam. Eventually the Australoid, for one reason or another, faded away from the mainland of Southeast Asia.

Around 2000 B.C., people moved out of the mountainous areas and started settling in

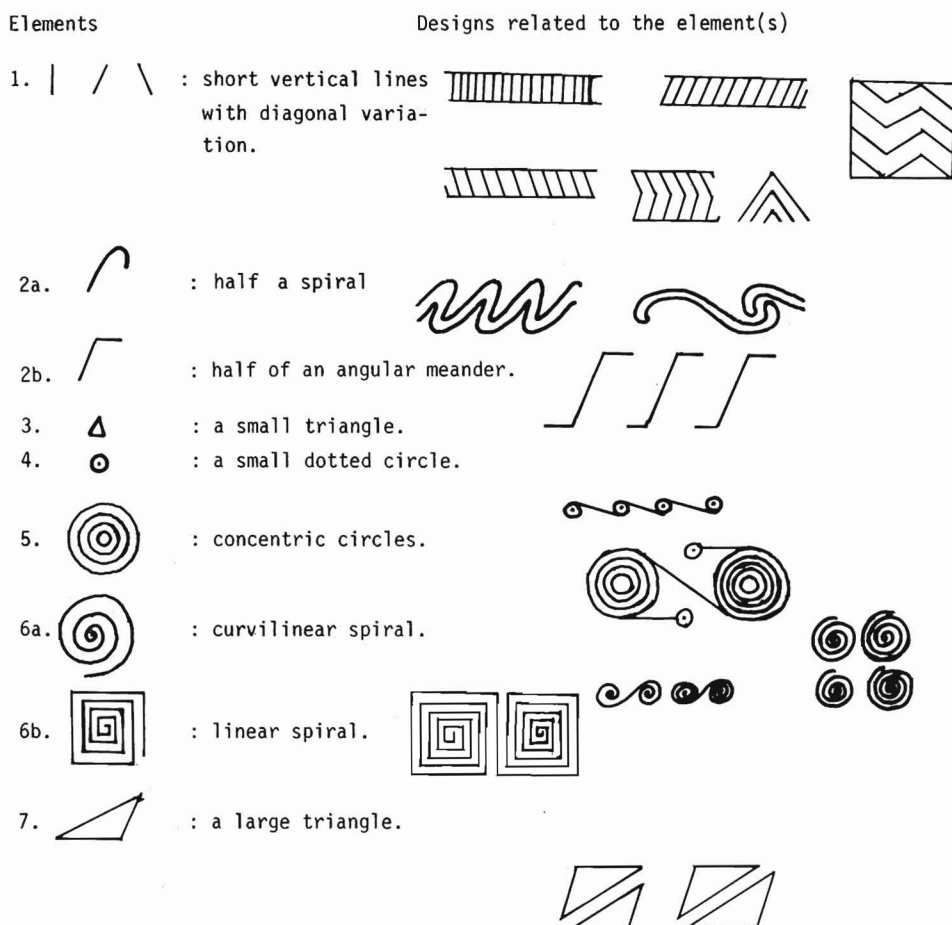


Fig. 15a Design elements of the Dongson Culture.

the open along the rivers. How did they live? What was their life like? First of all, they became agriculturists. Although there are not many remains of their agricultural activities, the few remains suggest that they knew how to plant rice, even paddy rice. They probably knew about other plants, yet no remains of those were found. They probably also worked in their *ray*, in which the slash-and-burn method is usually applied, as the mountain people do today. In addition to their agriculture, they raised their own animals. The remains of domesticated animals were found, though not in abundance. They also hunted and fished, though this was apparently not very important. Only a handful of fish bones and animal bones were found in the sites of Phung Nguyen. And the remains of hunting implements are few compared to the agricultural ones.

They built houses and lived for long periods in them. The houses seem to be built on piles. The pile houses are useful in the mountainous area to prevent the intrusion of snakes, small animals, and the like. Here in the lowlands they were also useful, but in a different way. These houses were not the houses of a nuclear family; they were large houses in which an extended family or even a clan lived.

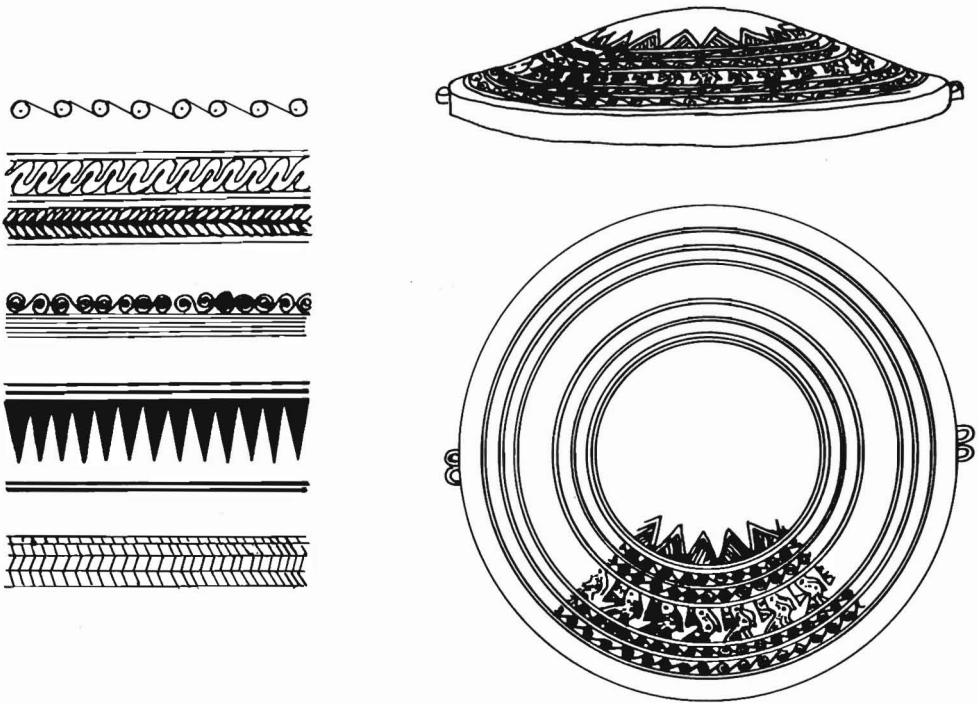


Fig. 15b *Left*, designs on a bronze artifact, Dongson Culture (Sinh 1976:43); *right*, designs on the tympanum of the Ngoc Lu drum (partially drawn from Bezacier 1975:158).

People wove cloth and wore ornaments of beads, pendants, and bracelets. All of these things, from food to ornaments, seemed to be stored in pots. Pots of these people were found in abundance. They were decorated or not decorated, in strange shapes and in common ones.

This people lived in the Red River area for more than a thousand years. Of course, living next to a great river, they had to know how to control flooding to a significant extent. As recorded today, the Red River had a great flow. It averages about 4000 m³ per second, its maximum 30,000 m³ per second and its minimum 700 m³ (Dufeil 1957:92). In the rainy season, which is around April to October, the river can cause tremendous floods. Three thousand years ago the river was different, but not essentially in terms of water flow or in terms of the effects of rains.

The control of such a big river requires not only know-how but also the contribution of "capital" in the broadest sense of the word. In other words, people during the Phung Nguyen period were probably organized into federations or villages (communities) or even into larger organizations.

The Phung Nguyen Culture and the Mythical Kingdom of Van Lang

The story of the kingdom of Van Lang is as follows: "Au Co, a wife of Loc Tuc, lived in the Phong Chau area with her 50 children. The oldest son of the 50 was selected to be the king of the country Van Lang. The country was divided into 15 sections, each of which

was governed by one of the king's brothers" (Linh 1976:41). The kingdom of Van Lang was established by 2879 B.C. and ended by 258 B.C. with the invasion of the Thuc Phan, who established Au Lac. In total, the dynasty of the Hung Kings lasted 18 generations. This is still controversial. The number 18 could mean 18 different names of the same dynasty rather than generations.

Also according to the story, Van Lang seemed to be governed by a rather "advanced" and hierarchical "government." The government consisted of the *Lac Vuong* (the Lac king), the *Lac Hau* (the marquises) and the *Lac tuong* (the underkings). The people were called *Lac dan* (the Lac people). They worked in the paddy fields, which were affected by the ebb and flow of the water.

What could be the parallel points between the findings of the Phung Nguyen Culture and the mythical kingdom of Van Lang? First of all, the locations of the Phung Nguyen sites and the region attributed to the Van Lang are approximately the same. As mentioned above, the capital of the Van Lang was in the Phong Chau area. According to the Vietnamese archaeologists and historians, Phong Chau also had another name, "Me Linh." Me Linh, or Phong Chau, was situated alongside the Red River. The Phong Chau area could cover the present cities and provinces of Vinh Phu, Ha son Binh, and part of Ha Tuyen, Ha Bac and Ha Noi (Linh 1976:42).

Another parallel point is the temporal factor. The initial date of the Hung Kings is not certain because it was added into Vietnamese history books by a historian several centuries ago.

We do not find a complete match between the Phung Nguyen Culture and Van Lang, but we cannot ignore the overlapping of the two. The Phung Nguyen Culture dates around 2000 B.C. or earlier and lasted around 1000 years, whereas the Hung Kings' period was said to have ended around 258 B.C. after 2000 years of existence.

In addition, the Phung Nguyen Culture did not vanish after 1000 B.C.; it was followed by the later culture of the bronze age. From Phung Nguyen to the bronze age there is a sense of smooth continuity. In other words, the bronze age developed mostly out of the Phung Nguyen Culture. Along the continuum from Phung Nguyen to Dongson was the formation, the development, and the end of the kingdom of Van Lang.

The third point is ethnological information. The Hung King appointed his brothers to govern different areas. This could mean that Van Lang probably consisted of a federation of different ethnic groups (Linh 1976:43). Near the Phung Nguyen site itself there is another site called Go Kon Lon ('Pig Hill'). This site is also located in the province of Vinh Phu. According to Boriskovski, the site of Go Kon Lon is "highly reminiscent of Phung Nguyen, Van Dien, and Lung Hoa. The only significant difference is that shouldered axes are present in large number at Go Kon Lon. . . . The absence of shouldered axes in the Phung Nguyen sites is a persistent feature of the material culture of a particular group of sites, which distinguishes them from the other sites"; the author goes on to speculate that "there are relics of different tribes living near each other, having similar technology and economy, but differing in the use of or absence of certain specific types of implements" (Boriskovski 1970:237).

In conclusion, we can say that during the beginning period of the Phung Nguyen Culture the people started to be organized into some kind of federation of different communities of different ethnic groups. With the organization into a semistate, the people were able partly to control the flooding of the Red River. This is the starting point for the development of the Red River civilization that extends into the bronze age. During the

course of this development came kingdom, the kingdom of Van Lang, which marked the dawn of Vietnamese civilization.

THE PLACE OF THE PHUNG NGUYEN CULTURE IN VIETNAMESE ARCHAEOLOGY

Before the discovery of the Phung Nguyen Culture, the archaeology of Vietnam appeared to contain only two well-known cultures: the Bacson-Hoabinhian Culture and the Dongson Culture. There was a big gap between the two cultures: at the beginning of the century, the Bacson-Hoabinhian Culture was considered as belonging to the mesolithic and early neolithic era, whereas the Dongson Culture was obviously part of the bronze age. The Bacson-Hoabinhian Culture is characterized by simple and crude tools compared to the Dongson Culture, which is characterized by the artistically made bronze drums.

The gap seemed to be unbridgeable. For that reason some people—Janse (1958), for example—thought of the Dongson Culture as something from far away; to Heine-Geldern, the decoration on the drums had its origin in eastern Europe.

The discovery of the Phung Nguyen Culture plays an important part in filling that gap. It gives a sense of continuity at least from the late Neolithic to the bronze age.

Near the end of the neolithic era a civilization developed in the area of the Red River, called the Red River civilization. This civilization developed out of the culture of Phung Nguyen, whose focus was along the valley of the Red River. The Phung Nguyen Culture had built the foundation for the culture to come: the Dongson. In the Phung Nguyen era, as mentioned before, people pulled together to fight against nature—namely, the seasonal floods brought to the area by the Red River. That is a good starting point for any state to be built. Also they knew rather well how to control the firing of their pottery. This again is a necessary step to working with bronze.

APPENDIX: SOME VIETNAMESE TERMS AND THEIR ENGLISH EQUIVALENTS

Vietnamese and English are totally unrelated languages. The translation from one to another (in this case Vietnamese to English) sometimes has to undergo conceptual modifications beyond just replacing one lexical unit with another. For this reason, I am presenting the following list of Vietnamese words and their English equivalents with concise definitions.

Pot: according to Webster's, a metallic or earthen vessel of rounded form, variously used. In Vietnamese, a pot can be a *noi*, *chau*, *binh*, or *vo*.

- Noi* always used in cooking. Its shape is generally round, but its size can vary greatly.
- Chau* always a container. It often has a flat bottom. Its size varies, and it is commonly used for washing things.
- Vo* also a container. It often has a round bottom and is used to store drinkable liquids such as potable water or wine.
- Binh* similar to a *vo* in function but different in shape. It tends to be slim; the height is two or three times bigger than the width.

Bowl: a concave vessel, usually hemispherical, to hold liquids and the like. In Vietnamese, a bowl could be a *chen*, a *to*, or a *tho*.

- Chen* similar to the shape of a bowl. It is small in size and used to hold food for (or *bat*) immediate consumption.
- To* bigger than a *chen*. It is usually used to serve food for communal eating.
- Tho* about the size of a *to* or bigger and has a lid. It can be used like a *to* or to store leftover food.

Axe; adze: in Vietnamese, *riu* (axe), *bon* (adze). The term *riu* has been used for a long time, but the term *bon* is a relatively new one. In the 1966 reports, although the authors distinguish between an axe and an adze in terms of shape, the equivalent term for adze is not used.

NOTE

¹The definition offered by Sinh and Diem is generally good except for one point: it does not distinguish clearly between a pot and a jar. Both have a round bottom, various rim forms, and are about the same size. The mouth of a jar is smaller than its body, as they say. On their sketch that point does not show up.

REFERENCES

BAYARD, DONN T.

- 1970 Excavation at Non Nok Tha, northeastern Thailand, 1968. *AP* 13: 109–143.

BEYER, H. OTLEY

- 1948 *Philippine and East Asian Archaeology, and Its Relation to the Origin of the Pacific Islands Population*. National Research Council of the Philippines Bulletin no. 29. Quezon City.

BEZACIER, L.

- 1958 L'Archéologie au Viêt-Nam d'après les travaux de l'École Française d'Extrême Orient. *France-Asie* 149-150: 513–559.
- 1975 *Le Vietnam, de la Préhistoire à la Fin de l'Occupation Chinoise*. Paris: Centre National de la Recherche Scientifique.

BORISKOVSki, P. I.

- 1969– Vietnam in primeval times. *Soviet Anthropology and Archaeology* 8(1): 70–95; 8(3): 214–257;
- 1970 8(4): 355–366; 9(2): 154–172.

BRUNEAU, MICHEL

- 1972 Ray et utilisation des Terres Hautes dans la Thaïlande Septentrionale. In *Étude de la Géographie Tropicale Offerte à Pierre Gourou*, edited by F. Braudel, L. Papy, and Ribeiro Mouton. Paris: La Haye.

CHIN, YOU DI

- 1975 *Ban Chiang Prehistoric Cultures*. Bangkok: Fine Arts Department.

CHINH, HOÀNG XUÂN

- 1966 Báo cáo khai quật đợt hai di chỉ Phùng Nguyên [Preliminary report of the second excavation at the site of Phùng Nguyên]. In *Một Số Báo Cáo Về Khảo Cổ Học Việt Nam Năm 1966*, pp. 127–161. Hà Nội: Đội Khảo Cổ.

CHINH, HOÀNG XUÂN, and NGUYỄN NGỌC DINH

- 1966 Báo Cáo Sơ Bộ Về Cuộc Khai Quật Đồ Đá Mới Văn Điển [A preliminary report of the excavation at Van Dien]. In *Một Số Báo Cáo Khảo Cổ Học Việt-Nam Năm 1966*, pp. 105–127. Hà Nội: Đội Khảo Cổ.

COLANI, M.

- 1931 Recherches sur le Préhistoire Indochinoise. *BEFEO* 30:299–422.

DAVIDSON, JEREMY H. C. S.

- 1974 Recent archaeological activity in Vietnam. *JHKAS* 6:80–99.

DOURNES, JACQUES

- 1971 Aspects de l'habitat et techniques de construction des Sre aux Jorai. *Objets et Mondes* 11(3):281–320.

DUFEIL, M. M.

- 1957 *Manuel de Géographie du Vietnam*. Fascicule 1. Saigon: Kim Lai ấn quán.

DUY, THANH

- 1966 Một vài nhận xét về di tích khảo cổ thuộc thời đại đồng thau ở Thiệu Dương (Thanh Hóa) [A brief report of the bronze age site at Thieu Duong, Thanh Hoa]. In *Một Số Báo Cáo Khảo Cổ Học Việt Nam Năm 1966*, pp. 193–231. Hà Nội: Đội Khảo Cổ.

GORMAN, C.

- 1969 Hoabinhian, a pebble tool complex with early plant associations in Southeast Asia. *S* 163:671–673.
1970 Excavations at Spirit Cave, North Thailand: some interim interpretations. *AP* 13:79–109.

HALL, D. G. E.

- 1955 *A History of Southeast Asia*. London: Macmillan.

HOA, DIỆP ĐÌNH

- 1977 Một vài suy nghĩ về đồ gốm Đông Sơn [Some reflections on Dong Son pottery]. *KCH* 3:57–72.

JANSE, OLOV R. T.

- 1958 *Archaeological Research in Indochina III*. Bruges: Institute Belge des Hautes Études Chinoises.

KHÁ, LÊ TRUNG

- 1976 Tác dụng niên đại khảo cổ của các hóa thạch thời cánh tân ở miền bắc Việt Nam [Pleistocene fossils in North Vietnam and archaeological dating]. *KCH* 17:30–33.

KHÁ, LÊ TRUNG, and VŨ THỀ LONG

- 1976 Mười năm nghiên cứu hóa thạch người và động vật cổ [Ten years of palaeontological research]. *KCH* 18:9–17.

KHẮU, HÀN VĂN

- 1976 Thử phân chia giai đoạn Phùng Nguyên qua các tài liệu gốm [A tentative division of the Phung Nguyen period based on a study of pottery artifacts]. *KCH* 19:5–23.

KHOA, NGUYỄN ĐÌNH

- 1976 Các dân tộc ở miền bắc Việt Nam (dẫn liệu nhân chủng học) [Ethnic groups in North Vietnam]. Hà Nội: Nhà Xuất Bản Khoa Học Xã Hội.

KINH, PHẠM VĂN

- 1977 Khai quật Bến Đò (Thành Phố Hồ Chí Minh) [Excavation at Ben Đò, Hồ Chí Minh City]. *KCH* 4: 19–22.

LAN, LÊ VĂN, and PHẠM VĂN KINH

- 1968 Di tích khảo cổ trên đất Phong Châu, địa bàn gốc của các vua Hùng [The archaeological sites in the area of Phong Chau, the base of the Hung Kings]. In *Nghiên Cứu Lịch Sử*, no. 107.

LINH, NGUYỄN

- 1976 Nước Văn Lang: Bờ cõi, tên nước và dân cư [The country of Van Lang: Its territory, its name and its people]. In *Thời Đại Hùng Vương—Lịch Sử—Kinh Tế—Chính Trị—Văn Hóa—Xã Hội*. Hà Nội: Nhà Xuất Bản Khoa Xã Hội.

MẠNH, PHẠM ĐỨC

- 1977 Điều tra Gò Đa (Song Be) [Investigation at Go Da, Song Be]. *KCH* 4: 22–29.

MATTHEWS, J. M.

- 1966 A review of the “Hoabinhian” in Indo-China. *AP* 9: 87–95.

NGHĨA, NGUYỄN VĂN

- 1960 Báo cáo về công tác phát hiện và Thăm dò di chỉ tân thạch khí Cổ Nhuê [Report of the discovery and test excavation of the neolithic site of Co Nhue]. *Nghiên Cứu Lịch Sử*, no. 122.

PHÙNG, HÀ VĂN

- 1977 Thử xếp loại chạc gồm, một di vật độc đáo của người Việt cổ [An attempt to classify the terracotta “swine legs,” a characteristic kind of artifact made by the ancient Viets]. *KCH* 3: 40–50.

Quý, Võ

- 1976 Kỹ thuật làm vòng tay Bằng đá [Techniques of making stone bracelets]. *KCH* 18: 69–74.

SAURIN, EDMOND

- 1973 Le Champ de Jarres de Hang Gon près Xuan Loc (Sud Vietnam). *BEFEO* 60: 329–357.

SINH, TRINH

- 1976 Vòng ống Đông Sơn [The Dong Son tubular bangles]. *KCH* 19: 42–58.

SINH, TRINH, and HÀ NGUYỄN ĐIỂM

- 1977 Kiểu dáng đồ dùng gốm từ Phùng Nguyên đến Đông Sơn. [The shapes of pottery vessels from Phung Nguyen to Dong Son]. *KCH* 2: 50–68.

SOLHEIM II, WILHELM G.

- 1964 *The Archaeology of Central Philippines: A Study Chiefly of the Iron Age and Its Relationships*. Monograph of the National Institute of Science and Technology, no. 10.
 1967 Southeast Asia and the West. *S* 157: 896–902.
 1971 New light on a forgotten past. *National Geographic* 139(3): 330–339.
 1974 The Nusantara and South China. *JHKAS* 5: 108–115.

Sứ, NGUYỄN KHẮC

- 1976 Rìu, cuốc hay mai [Axes, picks or hoes]. *KCH* 18: 61–69.

TÂM, NGUYỄN ĐỨC

- 1969 Một giai-đoạn lịch sử liên quan với hoạt động của kỷ đệ tứ và đặc điểm qui luật khảo cổ học Ở Việt Nam và Đông Nam Á [Some geological activities of the Quaternary and salient features of Vietnamese and Southeast Asian archaeology]. *Nghiên Cứu Lịch Sử*, no. 122.

TÂN, CHU VĂN

- 1976 Kết luận [Conclusion]. In *Thời Đại Hùng Vương—Lịch Sử—Kinh Tế—Chính Trị—Văn Hóa—Xã Hội*. Hà Nội: Nhà Xuất Bản Khoa Học Xã Hội.

TÂN, HÀ VĂN

- 1976 Khai quật Đồi Giâm [The excavation of Doi Giam]. *KCH* 17:62–63.

THÔNG, PHẠM HUY

- 1976 Hang Con Mòng [Con Mong Cave]. *Vietnam*, no. 215.